SEQUENCE LISTING

<110> PTC Therapeutics, Inc.

<120> METHODS FOR IDENTIFYING COMPOUNDS THAT MODULATE UNTRANSLATED REGION-DEPENDENT GENE EXPRESSION AND METHODS OF USING SAME

<130> 10589-012-228

<140>
<141>

<150> 60/441,637
<151> 2003-01-21

<160> 94

<170> PatentIn version 3.2

<210> 1
<211> 14
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Motif

<220>
<221> misc_feature
<222> 3, 7, 8, 11
<223> n = a, t, c, or g

<220>
<221> misc_feature
<222> (7)..(8)
<223> This represents one form of the sequence as described, other forms described may have up to five nucleotides in this variable region

<400> 1
ggntggnngg ntgg 14

<210> 2
<211> 14
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Motif

<220>
<221> misc_feature
<222> 3, 4, 7, 8, 11, 12
<223> n = a, t, g or c

<220>

<221> misc_feature
<222> (2)..(12)

<223> This represents one form of the sequence as described, other forms described have longer variable regions, typical is 2 - 10 nucleotides

<400> 2
ggnnggnngg nngg 14

<210> 3
<211> 14
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Motif

<220>
<221> misc_feature
<222> 3, 4, 7, 8, 11, 12
<223> n = a, t, g, or c

<220>
<221> misc_feature
<222> (2)..(12)
<223> This represents one form of the sequence as described, other forms described have longer variable regions, typical is 2 - 10 nucleotides

<400> 3
ggnnggnngg nngg 14

<210> 4
<211> 19
<212> RNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Motif

<400> 4
ccccrcccuc uuccccaag 19

<210> 5
<211> 152
<212> DNA
<213> Homo sapiens

<400> 5
gcagaggacc agctaagagg gagagaagca actacagacc ccccctgaaa acaaccctca 60

gacgccacat cccctgacaa gctgccaggc aggttctctt cctctcacat actgacccac 120

ggctccaccc tctctccccc ggaaaggaca cc 152

<210> 6
<211> 792
<212> DNA

<213> Homo sapiens

<400> 6
tgaggaggac gaacatccaa ccttcccaaa cgcctcccct gccccaatcc ctttattacc 60

ccctccttca gacaccctca acctcttctg gctcaaaaag agaattgggg gcttagggtc 120

ggaacccaag cttagaactt taagcaacaa gaccaccact tcgaaacctg ggattcagga 180

atgtgtggcc tgcacagtga attgctggca accactaaga attcaaactg gggcctccag 240

aactcactgg ggcctacagc tttgatccct gacatctgga atctggagac cagggagcct 300

ttggttctgg ccagaatgct gcaggacttg agaagacctc acctagaaat tgacacaagt 360

ggaccttagg ccttcctctc tccagatgtt tccagacttc cttgagacac ggagcccagc 420

cctccccatg gagccagctc cctctattta tgtttgcact tgtgattatt tattatttat 480

ttattattta tttatttaca gatgaatgta tttatttggg agaccggggt atcctggggg 540

acccaatgta ggagctgcct tggctcagac atgttttccg tgaaaacgga gctgaacaat 600

aggctgttcc catgtagccc cctggcctct gtgccttctt ttgattatgt tttttaaaat 660

atttatctga ttaagttgtc taaacaatgc tgatttggtg accaactgtc actcattgct 720

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taaagtttgc tt 792

<210> 7
<211> 21
<212> RNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Motif

<400> 7
auuuauuuau uuauuuauuu a 21

<210> 8
<211> 40
<212> DNA
<213> Homo sapiens

<400> 8
kctggaggat gtggctgcag agcctgctgc tcttgggcac 40

<210> 9
<211> 289
<212> DNA
<213> Homo sapiens

<400> 9
gccggggagc tgctctctca tgaaacaaga gctagaaact caggatggtc atcttggagg 60

gaccaagggg tgggccacag ccatggtggg agtggcctgg acctgccctg ggccacactg 120

accctgatac aggcatggca gaagaatggg aatattttat actgacagaa atcagtaata 180

tttatatatt tatattttta aaatatttat ttatttattt atttaagttc atattccata 240

tttattcaag atgttttacc gtaataatta ttattaaaaa tatgcttct 289

<210> 10
<211> 21
<212> RNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Motif

<400> 10
auuuauuuau uuauuuauuu a 21

<210> 11
<211> 47
<212> DNA
<213> Homo sapiens

<400> 11
atcactctct ttaatcacta ctcacattaa cctcaactcc tgccaca 47

<210> 12
<211> 307
<212> DNA
<213> Homo sapiens

<400> 12
taattaagtg cttcccactt aaaacatatc aggccttcta tttatttatt taaatattta 60

aattttatat ttattgttga atgtatggtt gctacctatt gtaactatta ttcttaatct 120

taaaactata aatatggatc ttttatgatt ctttttgtaa gccctagggg ctctaaaatg 180

gtttaccttа tttatcccaa aaatatttat tattatgttg aatgttaaat atagtatcta 240

tgtagattgg ttagtaaaac tatttaataa atttgataaa tataaaaaaa aaaaacaaaa 300

aaaaaaa 307

<210> 13
<211> 15
<212> RNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Motif

<220>
<221> misc_feature
<222> (1)..(15)

<223> n = a, t, g or c

<400> 13
nauuuauuua uuuan 15

<210> 14
<211> 62
<212> DNA
<213> Homo sapiens

<400> 14
ttctgccctc gagcccaccg ggaacgaaag agaagctcta tctcgcctcc aggagcccag 60

ct 62

<210> 15
<211> 427
<212> DNA
<213> Homo sapiens

<400> 15
tagcatgggc acctcagatt gttgttgtta atgggcattc cttcttctgg tcagaaacct 60

gtccactggg cacagaactt atgttgttct ctatggagaa ctaaaagtat gagcgttagg 120

acactatttt aattattttt aatttattaa tatttaaata tgtgaagctg agttaattta 180

tgtaagtcat atttatattt ttaagaagta ccacttgaaa cattttatgt attagttttg 240

aaataataat ggaaagtggc tatgcagttt gaatatcctt tgtttcagag ccagatcatt 300

tcttggaaag tgtaggctta cctcaaataa atggctaact tatacatatt tttaaagaaa 360

tatttatatt gtatttatat aatgtataaa tggtttttat accaataaat ggcattttaa 420

aaaattc 427

<210> 16
<211> 15
<212> RNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Motif

<220>
<221> misc_feature
<222> (1)..(15)
<223> n = a, t, g or c

<400> 16
nauuuauuua uuuan 15

<210> 17
<211> 701
<212> DNA

<213> Homo sapiens

<400> 17
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gcgagcagcg aaagcgacag gggcaaagtg agtgacctgc ttttgggggt gaccgccgga 120

gcgcggcgtg agccctcccc cttgggatcc cgcagctgac cagtcgcgct gacggacaga 180

cagacagaca ccgcccccag ccccagttac cacctcctcc ccggccggcg gcggacagtg 240

gacgcggcgg cgagccgcgg gcaggggccg gagcccgccc ccggaggcgg ggtggagggg 300

gtcggagctc gcggcgtcgc actgaaactt ttcgtccaac ttctgggctg ttctcgcttc 360

ggaggagccg tggtccgcgc gggggaagcc gagccgagcg gagccgcgag aagtgctagc 420

tcgggccggg aggagccgca gccggaggag ggggaggagg aagaagagaa ggaagaggag 480

agggggccgc agtggcgact cggcgctcgg aagccgggct catggacggg tgaggcggcg 540

gtgtgcgcag acagtgctcc agcgcgcgcg ctccccagcc ctggcccggc ctcgggccgg 600

gaggaagagt agctcgccga ggcgccgagg agagcgggcc gccccacagc ccgagccgga 660

gagggacgcg agccgcgcgc cccggtcggg cctccgaaac c 701

<210> 18
<211> 1892
<212> DNA
<213> Homo sapiens

<400> 18
tgagccgggc aggaggaagg agcctccctc agggtttcgg gaaccagatc tctctccagg 60

aaagactgat acagaacgat cgatacagaa accacgctgc cgccaccaca ccatcaccat 120

cgacagaaca gtccttaatc cagaaacctg aaatgaagga agaggagact ctgcgcagag 180

cactttgggt ccggagggcg agactccggc ggaagcattc ccgggcgggt gacccagcac 240

ggtccctctt ggaattggat tcgccatttt atttttcttg ctgctaaatc accgagcccg 300

gaagattaga gagttttatt tctgggattc ctgtagacac acccacccac atacatacat 360

ttatatatat atatattata tatatataaa aataaatatc tctattttat atatataaaa 420

tatatatatt ctttttttaa attaacagtg ctaatgttat tggtgtcttc actggatgta 480

tttgactgct gtggacttga gttgggaggg gaatgttccc actcagatcc tgacagggaa 540

gaggaggaga tgagagactc tggcatgatc tttttttttgt cccacttggt ggggccaggg 600

tcctctcccc tgcccaagaa tgtgcaaggc cagggcatgg gggcaaatat gacccagttt 660

tgggaacacc gacaaaccca gccctggcgc tgagcctctc taccccaggt cagacggaca 720

gaaagacaaa tcacaggttc cgggatgagg acaccggctc tgaccaggag tttggggagc 780

ttcaggacat tgctgtgctt tggggattcc ctccacatgc tgcacgcgca tctcgccccc 840

aggggcactg cctggaagat tcaggagcct gggcggcctt cgcttactct cacctgcttc 900

tgagttgccc aggaggccac tggcagatgt cccggcgaag agaagagaca cattgttgga 960

agaagcagcc catgacagcg ccccttcctg ggactcgccc tcatcctctt cctgctcccc 1020

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ttcccttccc ttcccgaggc acagagagac agggcaggat ccacgtgccc attgtggagg 1200

cagagaaaag agaaagtgtt ttatatacgg tacttattta atatcccttt ttaattagaa 1260

attagaacag ttaatttaat taaagagtag ggtttttttt cagtattctt ggttaatatt 1320

taatttcaac tatttatgag atgtatcttt tgctctctct tgctctctta tttgtaccgg 1380

tttttgtata taaaattcat gtttccaatc tctctctccc tgatcggtga cagtcactag 1440

cttatcttga acagatattt aattttgcta acactcagct ctgccctccc cgatcccctg 1500

gctccccagc acacattcct ttgaaagagg gtttcaatat acatctacat actatatata 1560

tattgggcaa cttgtatttg tgtgtatata tatatatata tgtttatgta tatatgtgat 1620

cctgaaaaaa taaacatcgc tattctgttt tttatatgtt caaaccaaac aagaaaaaat 1680

agagaattct acatactaaa tctctctcct tttttaattt taatatttgt tatcatttat 1740

ttattggtgc tactgtttat ccgtaataat tgtggggaaa agatattaac atcacgtctt 1800

tgtctctagt gcagtttttc gagatattcc gtagtacata tttatttta aacaacgaca 1860

aagaaataca gatatatctt aaaaaaaaaa aa 1892

<210> 19
<211> 249
<212> RNA
<213> Homo sapiens

<400> 19
ccgggcucau ggacggguga ggcggcggug ugcgcagaca gugcuccagc gcgcgcgcuc 60

cccagcccug gcccggccuc gggccgggag gaagaguagc ucgccgaggc gccgaggaga 120

gcgggccgcc ccacagcccg agccggagag ggacgcgagc cgcgcgcccc ggucgggccu 180

ccgaaaccau gaacuuucug cugucuuggg ugcauuggag ccuugccuug cugcucuacc 240

uccaccaug 249

<210> 20
<211> 15
<212> RNA
<213> Artificial

<220>

<223> Description of Artificial Sequence: Motif

<220>
<221> misc_feature
<222> (1)..(15)
<223> n = a, t, g or c

<400> 20
nauuuauuua uuuan 15

<210> 21
<211> 49
<212> DNA
<213> Homo sapiens

<400> 21
ccgccagatt tgaatcgcgg gacccgttgg cagaggtggc ggcggcggc 49

<210> 22
<211> 1141
<212> DNA
<213> Homo sapiens

<400> 22
ggcctctggc cggagctgcc tggtcccaga gtggctgcac cacttccagg gtttattccc 60

tggtgccacc agccttcctg tgggcccctt agcaatgtct taggaaagga gatcaacatt 120

ttcaaattag atgtttcaac tgtgctcctg ttttgtcttg aaagtggcac cagaggtgct 180

tctgcctgtg cagcgggtgc tgctggtaac agtggctgct tctctctctc tctctctttt 240

ttgggggctc atttttgctg ttttgattcc cgggcttacc aggtgagaag tgagggagga 300

agaaggcagt gtccctttg ctagagctga cagctttgtt cgcgtgggca gagccttcca 360

cagtgaatgt gtctggacct catgttgttg aggctgtcac agtcctgagt gtggacttgg 420

caggtgcctg ttgaatctga gctgcaggtt ccttatctgt cacacctgtg cctcctcaga 480

ggacagtttt tttgttgttg tgttttttg ttttttttt ttggtagatg catgacttgt 540

gtgtgatgag agaatggaga cagagtccct ggctcctcta ctgtttaaca acatggcttt 600

cttattttgt ttgaattgtt aattcacaga atagcacaaa ctacaattaa aactaagcac 660

aaagccattc taagtcattg gggaaacggg gtgaacttca ggtggatgag gagacagaat 720

agagtgatag gaagcgtctg gcagatactc cttttgccac tgctgtgtga ttagacaggc 780

ccagtgagcc gcggggcaca tgctggccgc tcctccctca gaaaaaggca gtggcctaaa 840

tccttttttaa atgacttggc tcgatgctgt gggggactgg ctgggctgct gcaggccgtg 900

tgtctgtcag cccaaccttc acatctgtca cgttctccac acgggggaga gacgcagtcc 960

gcccaggtcc ccgctttctt tggaggcagc agctcccgca gggctgaagt ctggcgtaag 1020

atgatggatt tgattcgccc tcctccctgt catagagctg cagggtggat tgttacagct 1080

tcgctggaaa cctctggagg tcatctcggc tgttcctgag aaataaaaag cctgtcattt 1140

c 1141

<210> 23
<211> 247
<212> DNA
<213> Homo sapiens

<400> 23
ccccggcgca gcgcggccgc agcagcctcc gccccccgca cggtgtgagc gcccgacgcg 60

gccgaggcgg ccggagtccc gagctagccc cggcggccgc cgccgcccag accggacgac 120

aggccacctc gtcggcgtcc gcccgagtcc ccgcctcgcc gccaacgcca caaccaccgc 180

gcacggcccc ctgactccgt ccagtattga tcgggagagc cggagcgagc tcttcgggga 240

gcagcag 247

<210> 24
<211> 1716
<212> DNA
<213> Homo sapiens

<400> 24
tgaccacgga ggatagtatg agccctaaaa atccagactc tttcgatacc caggaccaag 60

ccacagcagg tcctccatcc caacagccat gcccgcatta gctcttagac ccacagactg 120

gttttgcaac gtttacaccg actagccagg aagtacttcc acctcgggca cattttggga 180

agttgcattc ctttgtcttc aaactgtgaa gcatttacag aaacgcatcc agcaagaata 240

ttgtcccttt gagcagaaat ttatctttca aagaggtata tttgaaaaaa aaaaaaaaag 300

tatatgtgag gatttttatt gattggggat cttggagttt ttcattgtcg ctattgattt 360

ttacttcaat gggctcttcc aacaaggaag aagcttgctg gtagcacttg ctaccctgag 420

ttcatccagg cccaactgtg agcaaggagc acaagccaca agtcttccag aggatgcttg 480

attccagtgg ttctgcttca aggcttccac tgcaaaacac taaagatcca agaaggcctt 540

catggcccca gcaggccgga tcggtactgt atcaagtcat ggcaggtaca gtaggataag 600

ccactctgtc ccttcctggg caaagaagaa acggagggga tgaattcttc cttagactta 660

cttttgtaaa aatgtcccca cggtacttac tccccactga tggaccagtg gtttccagtc 720

atgagcgtta gactgacttg tttgtcttcc attccattgt tttgaaactc agtatgccgc 780

ccctgtcttg ctgtcatgaa atcagcaaga gaggatgaca catcaaataa taactcggat 840

tccagcccac attggattca tcagcatttg gaccaatagc ccacagctga gaatgtggaa 900

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atgaaatgca tcaggtcctt tggggcatag atcagaagac tacaaaaatg aagctgctct 1020

gaaatctcct ttagccatca ccccaacccc ccaaaattag tttgtgttac ttatggaaga 1080

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ctctcctagt caatatccac cccatccaat ttatcaagga agaaatggtt cagaaaatat 1560

tttcagccta cagttatgtt cagtcacaca cacatacaaa atgttccttt tgcttttaaa 1620

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ttttgtctca atgaaaataa aactatattc atttcc 1716

<210> 25
<211> 160
<212> DNA
<213> Homo sapiens

<400> 25
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cgagcagggt ctccgggtgg gcggcgcgac gccccgcgca ggctggaggc cgccgaggct 120

cgccatgccg ggagaactct aactccccca tggagtcggc 160

<210> 26
<211> 1306
<212> DNA
<213> Homo sapiens

<400> 26
tgaggcgcgc ggctgtggga ccgccctggg ccagcctccg gcggggaccc agggagtggt 60

ttggggtcgc cggatctcga ggcttgccca gaccgtgcga gccaggacta ggagattccg 120

gtgcctcctg aaagcctggc ctgctccgcg tgtcccctcc cttcctctgc gccggacttg 180

gtgcgtctaa gatgaggggg ccaggcggtg gcttctccct gcgaggaggg gagaattctt 240

ggggctgagc tgggagcccg gcaactctag tatttaggat aacttgtgcc ttggaaatgc 300

aaactcaccg ctccaatgcc tactgagtag ggggagcaaa tcgtgccttg tcattttatt 360

tggaggtttc ctgcctcctt cccgaggcta cagcagaccc ccatgagaga aggaggggag 420

caggcccgtg gaggaggggg gctcagggag ctgagatccc gacaagcccg ccagccccag 480

ccgctcctcc acgcctgtcc ttagaaaggg gtggaaacat agggacttgg ggcttggaac 540

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ctccctccgc acacacccca cccagcctgc tataggctgg ctttcccttg gggctggaac 660

tcactgcgat ggggtcacca ggtgaccagt ggagccccca ccccgagtca gaccagaaag 720

ctaggtcgtg ggtcagctct gaggatgtat acccctggtg ggagagggag acctagagat 780

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tgtatgcctt cagcattgcc taggaacacg aagcacgatc agtccatcca gagggaccgg 900

agttatgaca agcttcccaa atattttgct ttatcagccg atatcaacac ttgtatctgg 960

cctctgtgcc cagcagtgcc ttgtgcaatg tgaatgtacc gtctctgcta aaccaccatt 1020

ttatttggtt ttgttttgtt tggttttctc ggatacttgc caaaatgaga ctctccgtcg 1080

gcagctgggg gaagggtctg agactctctt tccttttggt tttgggatta cttttgatcc 1140

tgggggacca atgaggtgag gggggttctc ctttgccctc agctttccca gccctccggc 1200

ctgggctgcc cacaaggctt ctcccccaga ggccctggct cctggtcggg aagggaggtg 1260

cctcccgcca acgcatcact ggggctggga gcagggaagg gaattc 1306

<210> 27
<211> 216
<212> DNA
<213> Homo sapiens

<400> 27
agcgagagcg cccccgagca gcgcccgcgc cctccgcgcc ttctccgccg ggacctcgag 60

cgaaagacgc ccgcccgccg cccagccctc gcctccctgc ccaccgggca caccgcgccg 120

ccaccccgac cccgctgcgc acggcctgtc cgctgcacac cagcttgttg gcgtcttcgt 180

cgccgcgctc gccccgggct actcctgcgc gccaca 216

<210> 28
<211> 687
<212> DNA
<213> Homo sapiens

<400> 28
taaatgctac ctgggtttcc agggcacacc tagacaaaca rgggagaaga gtgtcagaat 60

cagaatcatg gagaaaatgg gcgggggtgg tgtgggtgat gggactcatt gtagaaagga 120

agccttgctc attcttgagg agcattaagg tatttcgaaa ctgccaaggg tgctggtgcg 180

gatggacact aatgcagcca cgattggaga atactttgct tcatagtatt ggagcacatg 240

ttactgcttc attttggagc ttgtggagtt gatgactttc tgttttctgt ttgtaaatta 300

tttgctaagc atattttctc taggcttttt tccttttggg gttctacagt cgtaaaagag 360

ataataagat tagttggaca gtttaaagct tttattcgtc ctttgacaaa agtaaatggg 420

agggcattcc atcccttcct gaaggggggac actccatgag tgtctgtgag aggcagctat 480

ctgcactcta aactgcaaac agaaatcagg tgttttaaga ctgaatgttt tatttatcaa 540

aatgtagctt ttggggaggg aggggaaatg taatactgga ataatttgta aatgatttta 600

attttatatt cagtgaaaag attttattta tggaattaac catttaataa agaaatattt 660

acctaaaaaa aaaaaaaaaa aaaaaaa 687

<210> 29
<211> 310
<212> DNA
<213> Homo sapiens

<400> 29
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gcgggaggct ggtgggtgtc gggggtggag atgtagaaga tgtgacgccg cggcccggcg 120

ggtgccagat tagcggacgg ctgcccgcgg ttgcaacggg atcccgggcg ctgcagcttg 180

ggaggcggct ctccccaggc ggcgtccgcg gagacaccca tccgtgaacc ccaggtcccg 240

ggccgccggc tcgccgcgca ccaggggccg gcggacagaa gagcggccga gcggctcgag 300

gctgggggac 310

<210> 30

<211> 5882
<212> DNA
<213> Homo sapiens

<400> 30
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tcagcccccg cccgcgcccc cagcccgccg ccgcgagcag cgcccggacc ccccagcggc 240

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cggagagggg cgccacgccg ccgtggccgc agatttgaaa gaagccgaca ctaaaccacc 180

aatatacaac aaggccattt tgtcaaacga gagtcagcct ttaacgaaa 229

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<212> DNA
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aatatgatct attttatgca tattgtttat aaagacacat ttacaattta cttttaatat 180

taaaaattac catattatga aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 233

<210> 43
<211> 349
<212> DNA
<213> Homo sapiens

<400> 43
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acccggttgc tgctgcccaa ggaccgcgga gtcggacgca ggcagaccat gtggaccctg 240

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cactttcaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa 337

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<213> Homo sapiens

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atgttcattg acttacacac aagagaagca caaaataaaa aattaataat taatttaatg 360

tctttgaaaa tgtaccattt atttttacat ttggggtcat aagaattgta ttacacttaa 420

gaatgcaata caatttgaag atcagatttt tctccctttg tgagaatttc tcagtatgtg 480

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agaaccacct acttcttggg gaggtaggtc tgcttccctt caactcagga tacaactgct 600

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ccttttgttt tctgtttgac aacatgttta ataaataaaa atgtcttgat atcagtaaga 180

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<213> Homo sapiens

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<210> 48
<211> 1192
<212> DNA
<213> Homo sapiens

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taataatgat tcttaaatgc tgtatggttt attatttaaa tgggtaaagc catttacata 660

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<211> 197

<212> DNA
<213> Homo sapiens

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ggctgcgcgc tccctcgcag cagccgggcg ggcaaaagcc cccagtcctc ggcccccgcg 180

caagcgacgc cgggaaa 197

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<211> 3293
<212> DNA
<213> Homo sapiens

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catatataga tgttttcatg aagaggagtg aaaagccaga aggatataga caaatgaggc 180

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gggaaggaca gcagtcttat ccatattcca ggaagccaca gtaaactgct cga 3293

<210> 51
<211> 424
<212> DNA
<213> Homo sapiens

<400> 51
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tcctcctgga aattcaacct gtttcgcagt ttctcgagga atcagcattc agtcaatccg 180

ggccgggagc agtcatctgt ggtgaggctg attggctggg caggaacagc gccggggcgt 240

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<211> 706
<212> DNA
<213> Homo sapiens

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<210> 54
<211> 641
<212> DNA
<213> Homo sapiens

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ggctggcccg gggagtcccc gtgtgcccca agaggctagc cccagggtga gcagggccct 1560

cagaggaaag gcagtatggc ggaggccatg ggggcccctc ggcattcaca cacagcctgg 1620

cctcccctgc ggagctgcat ggacgcctgg ctccaggctc caggctgact ggggcctctg 1680

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gccacggcct gggagggtgg ttcctgttct cagcatccac taatattcag tcctgtatat 1980

tttaataaaa taaacttgac aaaggaaaaa aaaaccg 2017

<210> 65
<211> 97
<212> DNA
<213> Homo sapiens

<400> 65
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aagcctaccc ccgcgccgcg ccctgcccgc cgctgcg 97

<210> 66
<211> 1474
<212> DNA
<213> Homo sapiens

<400> 66
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gctgttgctg ttaagtttgg aaaacagttt ttattctgtt ttataaacca gagagaaatg 240

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agctcctctt aagaagatta aaaaaaaaaa aaaa 1474

<210> 67
<211> 99
<212> DNA
<213> Homo sapiens

<400> 67
gcgcccggcc cccacccctc gcagcacccc gcgccccgcg ccctcccagc cgggtccagc 60

cggagccatg gggccggagc cgcagtgagc accatggag 99

<210> 68
<211> 614
<212> DNA
<213> Homo sapiens

<400> 68
tgaaccagaa ggccaagtcc gcagaagccc tgatgtgtcc tcagggagca gggaaggcct 60

gacttctgct ggcatcaaga ggtgggaggg ccctccgacc acttccaggg gaacctgcca 120

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gaggaaggaa cagcaatggt gtcagtatcc aggctttgta cagagtgctt ttctgtttag 480

tttttacttt ttttgttttg ttttttaaa gacgaaataa agacccaggg gagaatgggt 540

gttgtatggg gaggcaagtg tgggggggtcc ttctccacac ccactttgtc catttgcaaa 600

tatattttgg aaaa 614

<210> 69
<211> 36
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Primer

<400> 69
aaagtcgacg taatcgcgga ggcttggggc agccgg 36

<210> 70
<211> 30
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Primer

<400> 70
tttgcgactg gtcagctgcg ggatcccaag 30

<210> 71
<211> 33
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Primer

<400> 71
aagtcgacgt aagagctcca gagagaagtc gag 33

<210> 72
<211> 33
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Primer

<400> 72
aaacccgggc agcaaggcaa ggctccaatg cac 33

<210> 73
<211> 39
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Primer

<400> 73
gccgggcagg aggaaggagc ctccctcagg gtttcggga 39

<210> 74
<211> 30
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Primer

<400> 74
ctgcactaga gacaaagacg tgatgttaat 30

<210> 75
<211> 66
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Polylinker

<400> 75
gaacaaatgt cgacgggggc ccctagcaga tctagcgctg gatcccccgg ggagctcaug 60

gaagac 66

<210> 76
<211> 30
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Primer

<400> 76
cggtgttggg cgcgttattt atcggagttg 30

<210> 77
<211> 30
<212> DNA

<213> Artificial

<220>
<223> Description of Artificial Sequence: Primer

<400> 77
ttggcgaaga atgaaaatag ggttggtact 30

<210> 78
<211> 22
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Primer

<400> 78
ggtgaaggtc ggagtcaacg ga 22

<210> 79
<211> 21
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Primer

<400> 79
gagggatctc gctcctggaa g 21

<210> 80
<211> 55
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Primer

<400> 80
aaagtcgacg taaccgccag atttgaatcg cgggacccgt tggcagaggt ggcgg 55

<210> 81
<211> 54
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Primer

<400> 81
aaaggatccg ggcaacgtcg gggcacccat gccgccgccg ccacctctgc caac 54

<210> 82
<211> 40
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Primer

<400> 82
aaagcggccg cggcctctgc cggagctgcc tggtcccaga 40

<210> 83
<211> 37
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Primer

<400> 83
aaatctagac tcaggaacag ccgagatgac ctccaga 37

<210> 84
<211> 67
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Primer

<400> 84
ctagaagctt agggccgcgg atccgcgcgc ggttcgccgc gcgcggatcc gcggtagcaa 60

gttagtc 67

<210> 85
<211> 68
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Primer

<400> 85
gactaagctt gctaccgcgg atccgcgcgc ggcgaaccgc gcgcggatcc gcggccctaa 60

gcttctag 68

<210> 86
<211> 32
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Primer

<400> 86
caagaagctt gcgcccggcc ccccaccccc cg 32

<210> 87

<211> 31
<212> DNA
<213> Artificial

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<223> Description of Artificial Sequence: Primer

<400> 87
agcccatggt gctcactgcg gctccggccc c 31

<210> 88
<211> 22
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Primer

<400> 88
agactctgaa ccagaaggcc aa 22

<210> 89
<211> 36
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Primer

<400> 89
ctcggtacca gttttccaaa atatatttgc aaatgg 36

<210> 90
<211> 58
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Primer

<400> 90
cccaagcttc gcgcccggcc ccccacccct cgcagcaccc cgcgccccgc gccctccc 58

<210> 91
<211> 61
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Primer

<400> 91
ggccccatgg ctccggctgg acccggctgg gacccggctg ggagggcgcg ggagggcgcg 60

g 61

<210> 92
<211> 7008
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Expression Vector

<400> 92
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ccgcatagtt aagccagtat ctgctccctg cttgtgtgtt ggaggtcgct gagtagtgcg 120

cgagcaaaat ttaagctaca acaaggcaag gcttgaccga caattgcatg aagaatctgc 180

ttagggttag gcgttttgcg ctgcttcgcg atgtacgggc cagatatacg cgttgacatt 240

gattattgac tagttattaa tagtaatcaa ttacggggtc attagttcat agcccatata 300

tggagttccg cgttacataa cttacggtaa atggcccgcc tggctgaccg cccaacgacc 360

cccgcccatt gacgtcaata atgacgtatg ttcccatagt aacgccaata gggactttcc 420

attgacgtca atgggtggag tatttacggt aaactgccca cttggcagta catcaagtgt 480

atcatatgcc aagtacgccc cctattgacg tcaatgacgg taaatggccc gcctggcatt 540

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ataagggcga cacggaaatg ttgaatactc atactcttcc tttttcaata ttattgaagc 6900

atttatcagg gttattgtct catgagcgga tacatatttg aatgtattta gaaaaataaa 6960

caaatagggg ttccgcgcac atttccccga aaagtgccac ctgacgtc 7008

<210> 93
<211> 11693
<212> DNA
<213> Artificial

<220>
<223> Description of Artificial Sequence: Expression Vector

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ccaacgaccc ccgcccattg acgtcaataa tgacgtatgt tcccatagta acgccaatag 180

ggactttcca ttgacgtcaa tgggtggagt atttacggta aactgcccac ttggcagtac 240

atcaagtgta tcatatgcca agtccgcccc ctattgacgt caatgacggt aaatggcccg 300

cctggcatta tgcccagtac atgaccttac gggactttcc tacttggcag tacatctacg 360

tattagtcat cgctattacc atggtgatgc ggttttggca gtacaccaat gggcgtggat 420

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